Release notes for ENDF/B Development n-019_K_039 evaluation

April 26, 2017

- **checkr** Warnings:

    1. A previous error halted parsing of the current section
       MAT=1925, MF= 1, MT=451 (1): Parsing stopped

       ```
       ERROR(S) FOUND IN MAT=1925, MF= 1, MT=451
           SECTION CANNOT BE CHECKED FROM SEQUENCE NUMBER      263 TO     322
       ```

- **checkr** Errors:

    1. A variable is outside the allowed ENDF range
       MAT=1925, MF= 1, MT=451 (0): Variable range

       ```
       ERROR(S) FOUND IN MAT=1925, MF= 1, MT=451
           MOD =    3 OUT OF RANGE    0 -    0          RECORD NUMBER    263
       ```

    2. Missing a section in directory so your directory is messed up. This error will break everything else
       MAT=1925, MF= 2, MT=151 (0): Directory (b)

       ```
       ERROR(S) FOUND IN MAT=1925, MF= 2, MT=151
           SECTION  2/151 NOT IN DIRECTORY              RECORD NUMBER    324
       ```

    3. Missing a section in directory so your directory is messed up. This error will break everything else
       MAT=1925, MF= 3, MT= 1 (0): Directory (b)

       ```
       ERROR(S) FOUND IN MAT=1925, MF= 3, MT=  1
           SECTION  3/  1 NOT IN DIRECTORY              RECORD NUMBER    695
       ```

    4. Missing a section in directory so your directory is messed up. This error will break everything else
       MAT=1925, MF= 3, MT= 2 (0): Directory (b)

       ```
       ERROR(S) FOUND IN MAT=1925, MF= 3, MT=  2
           SECTION  3/  2 NOT IN DIRECTORY              RECORD NUMBER    719
       ```

    5. Missing a section in directory so your directory is messed up. This error will break everything else
       MAT=1925, MF= 3, MT= 4 (0): Directory (b)

       ```
       ERROR(S) FOUND IN MAT=1925, MF= 3, MT=  4
           SECTION  3/  4 NOT IN DIRECTORY              RECORD NUMBER    743
       ```

    6. Missing a section in directory so your directory is messed up. This error will break everything else
       MAT=1925, MF= 3, MT= 16 (0): Directory (b)

       ```
       ERROR(S) FOUND IN MAT=1925, MF= 3, MT= 16
           SECTION  3/ 16 NOT IN DIRECTORY              RECORD NUMBER    755
       ```

    7. Missing a section in directory so your directory is messed up. This error will break everything else
       MAT=1925, MF= 3, MT= 22 (0): Directory (b)

1

```
      ERROR(S) FOUND IN MAT=1925, MF= 3, MT= 22
         SECTION  3/ 22 NOT IN DIRECTORY                RECORD NUMBER     761
```

8. Missing a section in directory so your directory is messed up. This error will break everything else
   MAT=1925, MF= 3, MT= 28 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=1925, MF= 3, MT= 28
         SECTION  3/ 28 NOT IN DIRECTORY                RECORD NUMBER     768
```

9. Missing a section in directory so your directory is messed up. This error will break everything else
   MAT=1925, MF= 3, MT= 51 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=1925, MF= 3, MT= 51
         SECTION  3/ 51 NOT IN DIRECTORY                RECORD NUMBER     776
```

10. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=1925, MF= 3, MT= 52 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=1925, MF= 3, MT= 52
         SECTION  3/ 52 NOT IN DIRECTORY                RECORD NUMBER     788
```

11. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=1925, MF= 3, MT= 53 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=1925, MF= 3, MT= 53
         SECTION  3/ 53 NOT IN DIRECTORY                RECORD NUMBER     800
```

12. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=1925, MF= 3, MT= 54 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=1925, MF= 3, MT= 54
         SECTION  3/ 54 NOT IN DIRECTORY                RECORD NUMBER     811
```

13. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=1925, MF= 3, MT= 91 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=1925, MF= 3, MT= 91
         SECTION  3/ 91 NOT IN DIRECTORY                RECORD NUMBER     822
```

14. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=1925, MF= 3, MT=102 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=1925, MF= 3, MT=102
         SECTION  3/102 NOT IN DIRECTORY                RECORD NUMBER     833
```

15. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=1925, MF= 3, MT=103 (0): Directory (b)

2

```
        ERROR(S) FOUND IN MAT=1925, MF= 3, MT=103
          SECTION  3/103 NOT IN DIRECTORY                 RECORD NUMBER    849
```

16. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=1925, MF= 3, MT=107 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=1925, MF= 3, MT=107
          SECTION  3/107 NOT IN DIRECTORY                 RECORD NUMBER    863
```

17. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=1925, MF= 4, MT= 2 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=1925, MF= 4, MT=  2
          SECTION  4/  2 NOT IN DIRECTORY                 RECORD NUMBER    877
```

18. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=1925, MF= 4, MT= 16 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=1925, MF= 4, MT= 16
          SECTION  4/ 16 NOT IN DIRECTORY                 RECORD NUMBER   1021
```

19. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=1925, MF= 4, MT= 22 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=1925, MF= 4, MT= 22
          SECTION  4/ 22 NOT IN DIRECTORY                 RECORD NUMBER   1024
```

20. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=1925, MF= 4, MT= 28 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=1925, MF= 4, MT= 28
          SECTION  4/ 28 NOT IN DIRECTORY                 RECORD NUMBER   1027
```

21. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=1925, MF= 4, MT= 51 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=1925, MF= 4, MT= 51
          SECTION  4/ 51 NOT IN DIRECTORY                 RECORD NUMBER   1030
```

22. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=1925, MF= 4, MT= 52 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=1925, MF= 4, MT= 52
          SECTION  4/ 52 NOT IN DIRECTORY                 RECORD NUMBER   1051
```

23. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=1925, MF= 4, MT= 53 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=1925, MF= 4, MT= 53
          SECTION  4/ 53 NOT IN DIRECTORY                RECORD NUMBER    1071
```

24. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=1925, MF= 4, MT= 54 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=1925, MF= 4, MT= 54
          SECTION  4/ 54 NOT IN DIRECTORY                RECORD NUMBER    1090
```

25. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=1925, MF= 4, MT= 91 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=1925, MF= 4, MT= 91
          SECTION  4/ 91 NOT IN DIRECTORY                RECORD NUMBER    1109
```

26. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=1925, MF= 5, MT= 16 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=1925, MF= 5, MT= 16
          SECTION  5/ 16 NOT IN DIRECTORY                RECORD NUMBER    1145
```

27. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=1925, MF= 5, MT= 22 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=1925, MF= 5, MT= 22
          SECTION  5/ 22 NOT IN DIRECTORY                RECORD NUMBER    1228
```

28. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=1925, MF= 5, MT= 28 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=1925, MF= 5, MT= 28
          SECTION  5/ 28 NOT IN DIRECTORY                RECORD NUMBER    1369
```

29. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=1925, MF= 5, MT= 91 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=1925, MF= 5, MT= 91
          SECTION  5/ 91 NOT IN DIRECTORY                RECORD NUMBER    1534
```

30. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=1925, MF=12, MT= 16 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=1925, MF=12, MT= 16
          SECTION 12/ 16 NOT IN DIRECTORY                RECORD NUMBER    1773
```

31. Missing a gamma spectrum for continuum of gammas
    MAT=1925, MF=12, MT= 16 (1): No gamma spectrum

```
      ERROR(S) FOUND IN MAT=1925, MF=12, MT= 16
          CONTINUUM PHOTONS REQUIRE A SECTION IN MF=15
```

32. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=1925, MF=12, MT= 22 (0): Directory (b)

```
    ERROR(S) FOUND IN MAT=1925, MF=12, MT= 22
        SECTION 12/ 22 NOT IN DIRECTORY                RECORD NUMBER    1780
```

33. Missing a gamma spectrum for continuum of gammas
MAT=1925, MF=12, MT= 22 (1): No gamma spectrum

```
    ERROR(S) FOUND IN MAT=1925, MF=12, MT= 22
        CONTINUUM PHOTONS REQUIRE A SECTION IN MF=15
```

34. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=1925, MF=12, MT= 28 (0): Directory (b)

```
    ERROR(S) FOUND IN MAT=1925, MF=12, MT= 28
        SECTION 12/ 28 NOT IN DIRECTORY                RECORD NUMBER    1788
```

35. Missing a gamma spectrum for continuum of gammas
MAT=1925, MF=12, MT= 28 (1): No gamma spectrum

```
    ERROR(S) FOUND IN MAT=1925, MF=12, MT= 28
        CONTINUUM PHOTONS REQUIRE A SECTION IN MF=15
```

36. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=1925, MF=12, MT= 51 (0): Directory (b)

```
    ERROR(S) FOUND IN MAT=1925, MF=12, MT= 51
        SECTION 12/ 51 NOT IN DIRECTORY                RECORD NUMBER    1797
```

37. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=1925, MF=12, MT= 52 (0): Directory (b)

```
    ERROR(S) FOUND IN MAT=1925, MF=12, MT= 52
        SECTION 12/ 52 NOT IN DIRECTORY                RECORD NUMBER    1801
```

38. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=1925, MF=12, MT= 53 (0): Directory (b)

```
    ERROR(S) FOUND IN MAT=1925, MF=12, MT= 53
        SECTION 12/ 53 NOT IN DIRECTORY                RECORD NUMBER    1805
```

39. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=1925, MF=12, MT= 54 (0): Directory (b)

```
    ERROR(S) FOUND IN MAT=1925, MF=12, MT= 54
        SECTION 12/ 54 NOT IN DIRECTORY                RECORD NUMBER    1809
```

40. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=1925, MF=12, MT= 91 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=1925, MF=12, MT= 91
          SECTION 12/ 91 NOT IN DIRECTORY                    RECORD NUMBER    1814
```

41. Missing a gamma spectrum for continuum of gammas
    MAT=1925, MF=12, MT= 91 (1): No gamma spectrum

```
        ERROR(S) FOUND IN MAT=1925, MF=12, MT= 91
          CONTINUUM PHOTONS REQUIRE A SECTION IN MF=15
```

42. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=1925, MF=12, MT=102 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=1925, MF=12, MT=102
          SECTION 12/102 NOT IN DIRECTORY                    RECORD NUMBER    1824
```

43. Missing a gamma spectrum for continuum of gammas
    MAT=1925, MF=12, MT=102 (1): No gamma spectrum

```
        ERROR(S) FOUND IN MAT=1925, MF=12, MT=102
          CONTINUUM PHOTONS REQUIRE A SECTION IN MF=15
```

44. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=1925, MF=12, MT=103 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=1925, MF=12, MT=103
          SECTION 12/103 NOT IN DIRECTORY                    RECORD NUMBER    1838
```

45. Missing a gamma spectrum for continuum of gammas
    MAT=1925, MF=12, MT=103 (1): No gamma spectrum

```
        ERROR(S) FOUND IN MAT=1925, MF=12, MT=103
          CONTINUUM PHOTONS REQUIRE A SECTION IN MF=15
```

46. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=1925, MF=12, MT=107 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=1925, MF=12, MT=107
          SECTION 12/107 NOT IN DIRECTORY                    RECORD NUMBER    1850
```

47. Missing a gamma spectrum for continuum of gammas
    MAT=1925, MF=12, MT=107 (1): No gamma spectrum

```
        ERROR(S) FOUND IN MAT=1925, MF=12, MT=107
          CONTINUUM PHOTONS REQUIRE A SECTION IN MF=15
```

48. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=1925, MF=14, MT= 16 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=1925, MF=14, MT= 16
          SECTION 14/ 16 NOT IN DIRECTORY                    RECORD NUMBER    1863
```

49. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=1925, MF=14, MT= 22 (0): Directory (b)

```
    ERROR(S) FOUND IN MAT=1925, MF=14, MT= 22
       SECTION 14/ 22 NOT IN DIRECTORY              RECORD NUMBER    1865
```

50. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=1925, MF=14, MT= 28 (0): Directory (b)

```
    ERROR(S) FOUND IN MAT=1925, MF=14, MT= 28
       SECTION 14/ 28 NOT IN DIRECTORY              RECORD NUMBER    1867
```

51. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=1925, MF=14, MT= 51 (0): Directory (b)

```
    ERROR(S) FOUND IN MAT=1925, MF=14, MT= 51
       SECTION 14/ 51 NOT IN DIRECTORY              RECORD NUMBER    1869
```

52. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=1925, MF=14, MT= 52 (0): Directory (b)

```
    ERROR(S) FOUND IN MAT=1925, MF=14, MT= 52
       SECTION 14/ 52 NOT IN DIRECTORY              RECORD NUMBER    1871
```

53. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=1925, MF=14, MT= 53 (0): Directory (b)

```
    ERROR(S) FOUND IN MAT=1925, MF=14, MT= 53
       SECTION 14/ 53 NOT IN DIRECTORY              RECORD NUMBER    1873
```

54. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=1925, MF=14, MT= 54 (0): Directory (b)

```
    ERROR(S) FOUND IN MAT=1925, MF=14, MT= 54
       SECTION 14/ 54 NOT IN DIRECTORY              RECORD NUMBER    1875
```

55. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=1925, MF=14, MT= 91 (0): Directory (b)

```
    ERROR(S) FOUND IN MAT=1925, MF=14, MT= 91
       SECTION 14/ 91 NOT IN DIRECTORY              RECORD NUMBER    1877
```

56. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=1925, MF=14, MT=102 (0): Directory (b)

```
    ERROR(S) FOUND IN MAT=1925, MF=14, MT=102
       SECTION 14/102 NOT IN DIRECTORY              RECORD NUMBER    1879
```

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57. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=1925, MF=14, MT=103 (0): Directory (b)

```
   ERROR(S) FOUND IN MAT=1925, MF=14, MT=103
      SECTION 14/103 NOT IN DIRECTORY              RECORD NUMBER    1881
```

58. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=1925, MF=14, MT=107 (0): Directory (b)

```
   ERROR(S) FOUND IN MAT=1925, MF=14, MT=107
      SECTION 14/107 NOT IN DIRECTORY              RECORD NUMBER    1883
```

59. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=1925, MF=15, MT= 16 (0): Directory (b)

```
   ERROR(S) FOUND IN MAT=1925, MF=15, MT= 16
      SECTION 15/ 16 NOT IN DIRECTORY              RECORD NUMBER    1886
```

60. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=1925, MF=15, MT= 22 (0): Directory (b)

```
   ERROR(S) FOUND IN MAT=1925, MF=15, MT= 22
      SECTION 15/ 22 NOT IN DIRECTORY              RECORD NUMBER    1942
```

61. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=1925, MF=15, MT= 28 (0): Directory (b)

```
   ERROR(S) FOUND IN MAT=1925, MF=15, MT= 28
      SECTION 15/ 28 NOT IN DIRECTORY              RECORD NUMBER    2052
```

62. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=1925, MF=15, MT= 91 (0): Directory (b)

```
   ERROR(S) FOUND IN MAT=1925, MF=15, MT= 91
      SECTION 15/ 91 NOT IN DIRECTORY              RECORD NUMBER    2208
```

63. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=1925, MF=15, MT=102 (0): Directory (b)

```
   ERROR(S) FOUND IN MAT=1925, MF=15, MT=102
      SECTION 15/102 NOT IN DIRECTORY              RECORD NUMBER    2529
```

64. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=1925, MF=15, MT=103 (0): Directory (b)

```
   ERROR(S) FOUND IN MAT=1925, MF=15, MT=103
      SECTION 15/103 NOT IN DIRECTORY              RECORD NUMBER    3190
```

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65. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=1925, MF=15, MT=107 (0): Directory (b)

```
    ERROR(S) FOUND IN MAT=1925, MF=15, MT=107
        SECTION 15/107 NOT IN DIRECTORY                  RECORD NUMBER    3525
```

66. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=1925, MF=32, MT=151 (0): Directory (b)

```
    ERROR(S) FOUND IN MAT=1925, MF=32, MT=151
        SECTION 32/151 NOT IN DIRECTORY                  RECORD NUMBER    3847
```

- `psyche` Warnings:

1. Gamma width not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ISOTOPE MASS = 39. L = 0 / AT RESONANCE ENERGY 1.21560E+04 EV. THE GAMMA WIDTH 1.58440E-01 DEVIATES TOO MUCH FROM THE AVERAGE 8.29065E-01 (0): Gamma width

```
    FILE  2
       SECTION 151
          ISOTOPE MASS =  39. L =  0
                   AT RESONANCE ENERGY  1.21560E+04 EV. THE GAMMA WIDTH  1.58440E-01 DEVIATES TOO MUCH FROM THE AV
```

2. Gamma width not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ISOTOPE MASS = 39. L = 0 / AT RESONANCE ENERGY 1.22500E+05 EV. THE GAMMA WIDTH 8.70960E-02 DEVIATES TOO MUCH FROM THE AVERAGE 8.29065E-01 (0): Gamma width

```
    FILE  2
       SECTION 151
          ISOTOPE MASS =  39. L =  0
                   AT RESONANCE ENERGY  1.22500E+05 EV. THE GAMMA WIDTH  8.70960E-02 DEVIATES TOO MUCH FROM THE AV
```

3. Gamma width not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ISOTOPE MASS = 39. L = 0 / AT RESONANCE ENERGY 1.43947E+05 EV. THE GAMMA WIDTH 2.37950E-01 DEVIATES TOO MUCH FROM THE AVERAGE 8.29065E-01 (0): Gamma width

```
    FILE  2
       SECTION 151
          ISOTOPE MASS =  39. L =  0
                   AT RESONANCE ENERGY  1.43947E+05 EV. THE GAMMA WIDTH  2.37950E-01 DEVIATES TOO MUCH FROM THE AV
```

4. Gamma width not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ISOTOPE MASS = 39. L = 0 / AT RESONANCE ENERGY 1.92967E+05 EV. THE GAMMA WIDTH 1.40300E-01 DEVIATES TOO MUCH FROM THE AVERAGE 8.29065E-01 (0): Gamma width

```
    FILE  2
       SECTION 151
          ISOTOPE MASS =  39. L =  0
                   AT RESONANCE ENERGY  1.92967E+05 EV. THE GAMMA WIDTH  1.40300E-01 DEVIATES TOO MUCH FROM THE AV
```

5. Gamma width not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ISOTOPE MASS = 39. L = 0 / AT RESONANCE ENERGY 2.23802E+05 EV. THE GAMMA WIDTH 1.13810E-01 DEVIATES TOO MUCH FROM THE AVERAGE 8.29065E-01 (0): Gamma width

```
FILE  2
   SECTION 151
      ISOTOPE MASS =  39. L =  0
               AT RESONANCE ENERGY  2.23802E+05 EV. THE GAMMA WIDTH  1.13810E-01 DEVIATES TOO MUCH FROM THE AV
```

6. Gamma width not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ISOTOPE MASS = 39. L = 0 / AT RESONANCE ENERGY 2.24320E+05 EV. THE GAMMA WIDTH 1.94760E-01 DEVIATES TOO MUCH FROM THE AVERAGE 8.29065E-01 (0): Gamma width

```
FILE  2
   SECTION 151
      ISOTOPE MASS =  39. L =  0
               AT RESONANCE ENERGY  2.24320E+05 EV. THE GAMMA WIDTH  1.94760E-01 DEVIATES TOO MUCH FROM THE AV
```

7. Gamma width not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ISOTOPE MASS = 39. L = 0 / AT RESONANCE ENERGY 2.28507E+05 EV. THE GAMMA WIDTH 2.22010E-01 DEVIATES TOO MUCH FROM THE AVERAGE 8.29065E-01 (0): Gamma width

```
FILE  2
   SECTION 151
      ISOTOPE MASS =  39. L =  0
               AT RESONANCE ENERGY  2.28507E+05 EV. THE GAMMA WIDTH  2.22010E-01 DEVIATES TOO MUCH FROM THE AV
```

8. Gamma width not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ISOTOPE MASS = 39. L = 0 / AT RESONANCE ENERGY 2.43771E+05 EV. THE GAMMA WIDTH 8.81010E-02 DEVIATES TOO MUCH FROM THE AVERAGE 8.29065E-01 (0): Gamma width

```
FILE  2
   SECTION 151
      ISOTOPE MASS =  39. L =  0
               AT RESONANCE ENERGY  2.43771E+05 EV. THE GAMMA WIDTH  8.81010E-02 DEVIATES TOO MUCH FROM THE AV
```

9. Gamma width not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ISOTOPE MASS = 39. L = 0 / AT RESONANCE ENERGY 2.44082E+05 EV. THE GAMMA WIDTH 9.24760E-02 DEVIATES TOO MUCH FROM THE AVERAGE 8.29065E-01 (0): Gamma width

```
FILE  2
   SECTION 151
      ISOTOPE MASS =  39. L =  0
               AT RESONANCE ENERGY  2.44082E+05 EV. THE GAMMA WIDTH  9.24760E-02 DEVIATES TOO MUCH FROM THE AV
```

10. Gamma width not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ISOTOPE MASS = 39. L = 0 / AT RESONANCE ENERGY 2.44641E+05 EV. THE GAMMA WIDTH 1.77860E-01 DEVIATES TOO MUCH FROM THE AVERAGE 8.29065E-01 (0): Gamma width

```
FILE  2
   SECTION 151
      ISOTOPE MASS =  39. L =  0
                  AT RESONANCE ENERGY  2.44641E+05 EV. THE GAMMA WIDTH  1.77860E-01 DEVIATES TOO MUCH FROM THE AV
```

11. Gamma width not in agreement with PSYCHE's expectations
*FILE 2 / SECTION 151 / ISOTOPE MASS = 39. L = 0 / AT RESONANCE
ENERGY 2.46342E+05 EV. THE GAMMA WIDTH 9.49390E-02 DEVIATES TOO
MUCH FROM THE AVERAGE 8.29065E-01 (0): Gamma width*

```
FILE  2
   SECTION 151
      ISOTOPE MASS =  39. L =  0
                  AT RESONANCE ENERGY  2.46342E+05 EV. THE GAMMA WIDTH  9.49390E-02 DEVIATES TOO MUCH FROM THE AV
```

12. Gamma width not in agreement with PSYCHE's expectations
*FILE 2 / SECTION 151 / ISOTOPE MASS = 39. L = 0 / AT RESONANCE
ENERGY 2.58494E+05 EV. THE GAMMA WIDTH 2.08070E-01 DEVIATES TOO
MUCH FROM THE AVERAGE 8.29065E-01 (0): Gamma width*

```
FILE  2
   SECTION 151
      ISOTOPE MASS =  39. L =  0
                  AT RESONANCE ENERGY  2.58494E+05 EV. THE GAMMA WIDTH  2.08070E-01 DEVIATES TOO MUCH FROM THE AV
```

13. Gamma width not in agreement with PSYCHE's expectations
*FILE 2 / SECTION 151 / ISOTOPE MASS = 39. L = 0 / AT RESONANCE
ENERGY 2.59090E+05 EV. THE GAMMA WIDTH 1.52040E-01 DEVIATES TOO
MUCH FROM THE AVERAGE 8.29065E-01 (0): Gamma width*

```
FILE  2
   SECTION 151
      ISOTOPE MASS =  39. L =  0
                  AT RESONANCE ENERGY  2.59090E+05 EV. THE GAMMA WIDTH  1.52040E-01 DEVIATES TOO MUCH FROM THE AV
```

14. Gamma width not in agreement with PSYCHE's expectations
*FILE 2 / SECTION 151 / ISOTOPE MASS = 39. L = 0 / AT RESONANCE
ENERGY 3.01071E+05 EV. THE GAMMA WIDTH 2.22380E-01 DEVIATES TOO
MUCH FROM THE AVERAGE 8.29065E-01 (0): Gamma width*

```
FILE  2
   SECTION 151
      ISOTOPE MASS =  39. L =  0
                  AT RESONANCE ENERGY  3.01071E+05 EV. THE GAMMA WIDTH  2.22380E-01 DEVIATES TOO MUCH FROM THE AV
```

15. Gamma width not in agreement with PSYCHE's expectations
*FILE 2 / SECTION 151 / ISOTOPE MASS = 39. L = 0 / AT RESONANCE
ENERGY 3.53178E+05 EV. THE GAMMA WIDTH 3.04580E+00 DEVIATES TOO
MUCH FROM THE AVERAGE 8.29065E-01 (0): Gamma width*

```
FILE  2
   SECTION 151
      ISOTOPE MASS =  39. L =  0
                  AT RESONANCE ENERGY  3.53178E+05 EV. THE GAMMA WIDTH  3.04580E+00 DEVIATES TOO MUCH FROM THE AV
```

16. Strength function in URR not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ISOTOPE MASS = 39. L = 0 / STRENGTH FUNCTION

```
FILE  2
   SECTION 151
       ISOTOPE MASS =  39. L =   0
                    STRENGTH FUNCTION IS   2.13182E-05
                                     STRENGTH FUNCTION 2.13182E-05
... [1 more lines]
```

17. Gamma width not in agreement with PSYCHE's expectations
    FILE 2 / SECTION 151 / ISOTOPE MASS = 39. L = 1 / AT RESONANCE
    ENERGY 1.03498E+04 EV. THE GAMMA WIDTH 6.50120E-02 DEVIATES TOO
    MUCH FROM THE AVERAGE 1.08495E+00 (0): Gamma width

```
FILE  2
   SECTION 151
       ISOTOPE MASS =  39. L =   1
                    AT RESONANCE ENERGY  1.03498E+04 EV. THE GAMMA WIDTH  6.50120E-02 DEVIATES TOO MUCH FROM THE AV
```

18. Gamma width not in agreement with PSYCHE's expectations
    FILE 2 / SECTION 151 / ISOTOPE MASS = 39. L = 1 / AT RESONANCE
    ENERGY 1.26234E+04 EV. THE GAMMA WIDTH 3.45360E-01 DEVIATES TOO
    MUCH FROM THE AVERAGE 1.08495E+00 (0): Gamma width

```
FILE  2
   SECTION 151
       ISOTOPE MASS =  39. L =   1
                    AT RESONANCE ENERGY  1.26234E+04 EV. THE GAMMA WIDTH  3.45360E-01 DEVIATES TOO MUCH FROM THE AV
```

19. Gamma width not in agreement with PSYCHE's expectations
    FILE 2 / SECTION 151 / ISOTOPE MASS = 39. L = 1 / AT RESONANCE
    ENERGY 1.42984E+04 EV. THE GAMMA WIDTH 2.32240E-01 DEVIATES TOO
    MUCH FROM THE AVERAGE 1.08495E+00 (0): Gamma width

```
FILE  2
   SECTION 151
       ISOTOPE MASS =  39. L =   1
                    AT RESONANCE ENERGY  1.42984E+04 EV. THE GAMMA WIDTH  2.32240E-01 DEVIATES TOO MUCH FROM THE AV
```

20. Gamma width not in agreement with PSYCHE's expectations
    FILE 2 / SECTION 151 / ISOTOPE MASS = 39. L = 1 / AT RESONANCE
    ENERGY 1.59542E+04 EV. THE GAMMA WIDTH 2.77330E-01 DEVIATES TOO
    MUCH FROM THE AVERAGE 1.08495E+00 (0): Gamma width

```
FILE  2
   SECTION 151
       ISOTOPE MASS =  39. L =   1
                    AT RESONANCE ENERGY  1.59542E+04 EV. THE GAMMA WIDTH  2.77330E-01 DEVIATES TOO MUCH FROM THE AV
```

21. Gamma width not in agreement with PSYCHE's expectations
    FILE 2 / SECTION 151 / ISOTOPE MASS = 39. L = 1 / AT RESONANCE
    ENERGY 1.67115E+04 EV. THE GAMMA WIDTH 2.95350E-01 DEVIATES TOO
    MUCH FROM THE AVERAGE 1.08495E+00 (0): Gamma width

```
FILE  2
   SECTION 151
      ISOTOPE MASS =  39. L =  1
               AT RESONANCE ENERGY  1.67115E+04 EV. THE GAMMA WIDTH  2.95350E-01 DEVIATES TOO MUCH FROM THE AV
```

22. Gamma width not in agreement with PSYCHE's expectations
*FILE 2 / SECTION 151 / ISOTOPE MASS = 39. L = 1 / AT RESONANCE
ENERGY 2.83579E+04 EV. THE GAMMA WIDTH 1.97070E-01 DEVIATES TOO
MUCH FROM THE AVERAGE 1.08495E+00 (0): Gamma width*

```
FILE  2
   SECTION 151
      ISOTOPE MASS =  39. L =  1
               AT RESONANCE ENERGY  2.83579E+04 EV. THE GAMMA WIDTH  1.97070E-01 DEVIATES TOO MUCH FROM THE AV
```

23. Gamma width not in agreement with PSYCHE's expectations
*FILE 2 / SECTION 151 / ISOTOPE MASS = 39. L = 1 / AT RESONANCE
ENERGY 3.33640E+04 EV. THE GAMMA WIDTH 3.08130E-01 DEVIATES TOO
MUCH FROM THE AVERAGE 1.08495E+00 (0): Gamma width*

```
FILE  2
   SECTION 151
      ISOTOPE MASS =  39. L =  1
               AT RESONANCE ENERGY  3.33640E+04 EV. THE GAMMA WIDTH  3.08130E-01 DEVIATES TOO MUCH FROM THE AV
```

24. Gamma width not in agreement with PSYCHE's expectations
*FILE 2 / SECTION 151 / ISOTOPE MASS = 39. L = 1 / AT RESONANCE
ENERGY 5.47886E+04 EV. THE GAMMA WIDTH 3.11370E-01 DEVIATES TOO
MUCH FROM THE AVERAGE 1.08495E+00 (0): Gamma width*

```
FILE  2
   SECTION 151
      ISOTOPE MASS =  39. L =  1
               AT RESONANCE ENERGY  5.47886E+04 EV. THE GAMMA WIDTH  3.11370E-01 DEVIATES TOO MUCH FROM THE AV
```

25. Gamma width not in agreement with PSYCHE's expectations
*FILE 2 / SECTION 151 / ISOTOPE MASS = 39. L = 1 / AT RESONANCE
ENERGY 5.51359E+04 EV. THE GAMMA WIDTH 3.46770E-01 DEVIATES TOO
MUCH FROM THE AVERAGE 1.08495E+00 (0): Gamma width*

```
FILE  2
   SECTION 151
      ISOTOPE MASS =  39. L =  1
               AT RESONANCE ENERGY  5.51359E+04 EV. THE GAMMA WIDTH  3.46770E-01 DEVIATES TOO MUCH FROM THE AV
```

26. Gamma width not in agreement with PSYCHE's expectations
*FILE 2 / SECTION 151 / ISOTOPE MASS = 39. L = 1 / AT RESONANCE
ENERGY 5.57448E+04 EV. THE GAMMA WIDTH 6.36960E-02 DEVIATES TOO
MUCH FROM THE AVERAGE 1.08495E+00 (0): Gamma width*

```
FILE  2
   SECTION 151
      ISOTOPE MASS =  39. L =  1
               AT RESONANCE ENERGY  5.57448E+04 EV. THE GAMMA WIDTH  6.36960E-02 DEVIATES TOO MUCH FROM THE AV
```

27. Gamma width not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ISOTOPE MASS = 39. L = 1 / AT RESONANCE

ENERGY 5.58149E+04 EV. THE GAMMA WIDTH 1.79930E-01 DEVIATES TOO MUCH FROM THE AVERAGE 1.08495E+00 (0): Gamma width

```
FILE  2
   SECTION 151
      ISOTOPE MASS =  39. L =  1
                AT RESONANCE ENERGY  5.58149E+04 EV. THE GAMMA WIDTH  1.79930E-01 DEVIATES TOO MUCH FROM THE AV
```

28. Gamma width not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ISOTOPE MASS = 39. L = 1 / AT RESONANCE ENERGY 5.67231E+04 EV. THE GAMMA WIDTH 2.57010E-01 DEVIATES TOO MUCH FROM THE AVERAGE 1.08495E+00 (0): Gamma width

```
FILE  2
   SECTION 151
      ISOTOPE MASS =  39. L =  1
                AT RESONANCE ENERGY  5.67231E+04 EV. THE GAMMA WIDTH  2.57010E-01 DEVIATES TOO MUCH FROM THE AV
```

29. Gamma width not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ISOTOPE MASS = 39. L = 1 / AT RESONANCE ENERGY 5.99764E+04 EV. THE GAMMA WIDTH 3.08950E-01 DEVIATES TOO MUCH FROM THE AVERAGE 1.08495E+00 (0): Gamma width

```
FILE  2
   SECTION 151
      ISOTOPE MASS =  39. L =  1
                AT RESONANCE ENERGY  5.99764E+04 EV. THE GAMMA WIDTH  3.08950E-01 DEVIATES TOO MUCH FROM THE AV
```

30. Gamma width not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ISOTOPE MASS = 39. L = 1 / AT RESONANCE ENERGY 6.22447E+04 EV. THE GAMMA WIDTH 3.16780E-01 DEVIATES TOO MUCH FROM THE AVERAGE 1.08495E+00 (0): Gamma width

```
FILE  2
   SECTION 151
      ISOTOPE MASS =  39. L =  1
                AT RESONANCE ENERGY  6.22447E+04 EV. THE GAMMA WIDTH  3.16780E-01 DEVIATES TOO MUCH FROM THE AV
```

31. Gamma width not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ISOTOPE MASS = 39. L = 1 / AT RESONANCE ENERGY 6.87735E+04 EV. THE GAMMA WIDTH 1.88310E-01 DEVIATES TOO MUCH FROM THE AVERAGE 1.08495E+00 (0): Gamma width

```
FILE  2
   SECTION 151
      ISOTOPE MASS =  39. L =  1
                AT RESONANCE ENERGY  6.87735E+04 EV. THE GAMMA WIDTH  1.88310E-01 DEVIATES TOO MUCH FROM THE AV
```

32. Gamma width not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ISOTOPE MASS = 39. L = 1 / AT RESONANCE ENERGY 8.06409E+04 EV. THE GAMMA WIDTH 3.38220E+00 DEVIATES TOO MUCH FROM THE AVERAGE 1.08495E+00 (0): Gamma width

```
FILE  2
   SECTION 151
      ISOTOPE MASS =  39. L =  1
                AT RESONANCE ENERGY  8.06409E+04 EV. THE GAMMA WIDTH  3.38220E+00 DEVIATES TOO MUCH FROM THE AV
```

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33. Gamma width not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ISOTOPE MASS = 39. L = 1 / AT RESONANCE ENERGY 8.11678E+04 EV. THE GAMMA WIDTH 2.84780E-01 DEVIATES TOO MUCH FROM THE AVERAGE 1.08495E+00 (0): Gamma width

```
    FILE  2
       SECTION 151
          ISOTOPE MASS =  39. L =  1
                    AT RESONANCE ENERGY  8.11678E+04 EV. THE GAMMA WIDTH  2.84780E-01 DEVIATES TOO MUCH FROM THE AV
```

34. Gamma width not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ISOTOPE MASS = 39. L = 1 / AT RESONANCE ENERGY 8.49032E+04 EV. THE GAMMA WIDTH 3.57220E-01 DEVIATES TOO MUCH FROM THE AVERAGE 1.08495E+00 (0): Gamma width

```
    FILE  2
       SECTION 151
          ISOTOPE MASS =  39. L =  1
                    AT RESONANCE ENERGY  8.49032E+04 EV. THE GAMMA WIDTH  3.57220E-01 DEVIATES TOO MUCH FROM THE AV
```

35. Gamma width not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ISOTOPE MASS = 39. L = 1 / AT RESONANCE ENERGY 1.02280E+05 EV. THE GAMMA WIDTH 3.54100E-01 DEVIATES TOO MUCH FROM THE AVERAGE 1.08495E+00 (0): Gamma width

```
    FILE  2
       SECTION 151
          ISOTOPE MASS =  39. L =  1
                    AT RESONANCE ENERGY  1.02280E+05 EV. THE GAMMA WIDTH  3.54100E-01 DEVIATES TOO MUCH FROM THE AV
```

36. Gamma width not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ISOTOPE MASS = 39. L = 1 / AT RESONANCE ENERGY 1.08592E+05 EV. THE GAMMA WIDTH 3.01730E-01 DEVIATES TOO MUCH FROM THE AVERAGE 1.08495E+00 (0): Gamma width

```
    FILE  2
       SECTION 151
          ISOTOPE MASS =  39. L =  1
                    AT RESONANCE ENERGY  1.08592E+05 EV. THE GAMMA WIDTH  3.01730E-01 DEVIATES TOO MUCH FROM THE AV
```

37. Gamma width not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ISOTOPE MASS = 39. L = 1 / AT RESONANCE ENERGY 1.09659E+05 EV. THE GAMMA WIDTH 3.00250E-01 DEVIATES TOO MUCH FROM THE AVERAGE 1.08495E+00 (0): Gamma width

```
    FILE  2
       SECTION 151
          ISOTOPE MASS =  39. L =  1
                    AT RESONANCE ENERGY  1.09659E+05 EV. THE GAMMA WIDTH  3.00250E-01 DEVIATES TOO MUCH FROM THE AV
```

38. Gamma width not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ISOTOPE MASS = 39. L = 1 / AT RESONANCE ENERGY 1.09929E+05 EV. THE GAMMA WIDTH 2.78910E-01 DEVIATES TOO MUCH FROM THE AVERAGE 1.08495E+00 (0): Gamma width

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```
    FILE  2
       SECTION 151
          ISOTOPE MASS =  39. L =  1
                    AT RESONANCE ENERGY  1.09929E+05 EV. THE GAMMA WIDTH  2.78910E-01 DEVIATES TOO MUCH FROM THE AV
```

39. Gamma width not in agreement with PSYCHE's expectations
*FILE 2 / SECTION 151 / ISOTOPE MASS = 39. L = 1 / AT RESONANCE
ENERGY 1.29438E+05 EV. THE GAMMA WIDTH 2.46070E-01 DEVIATES TOO
MUCH FROM THE AVERAGE 1.08495E+00 (0): Gamma width*

```
    FILE  2
       SECTION 151
          ISOTOPE MASS =  39. L =  1
                    AT RESONANCE ENERGY  1.29438E+05 EV. THE GAMMA WIDTH  2.46070E-01 DEVIATES TOO MUCH FROM THE AV
```

40. Gamma width not in agreement with PSYCHE's expectations
*FILE 2 / SECTION 151 / ISOTOPE MASS = 39. L = 1 / AT RESONANCE
ENERGY 1.32368E+05 EV. THE GAMMA WIDTH 8.34550E-02 DEVIATES TOO
MUCH FROM THE AVERAGE 1.08495E+00 (0): Gamma width*

```
    FILE  2
       SECTION 151
          ISOTOPE MASS =  39. L =  1
                    AT RESONANCE ENERGY  1.32368E+05 EV. THE GAMMA WIDTH  8.34550E-02 DEVIATES TOO MUCH FROM THE AV
```

41. Gamma width not in agreement with PSYCHE's expectations
*FILE 2 / SECTION 151 / ISOTOPE MASS = 39. L = 1 / AT RESONANCE
ENERGY 1.46272E+05 EV. THE GAMMA WIDTH 3.46830E-01 DEVIATES TOO
MUCH FROM THE AVERAGE 1.08495E+00 (0): Gamma width*

```
    FILE  2
       SECTION 151
          ISOTOPE MASS =  39. L =  1
                    AT RESONANCE ENERGY  1.46272E+05 EV. THE GAMMA WIDTH  3.46830E-01 DEVIATES TOO MUCH FROM THE AV
```

42. Gamma width not in agreement with PSYCHE's expectations
*FILE 2 / SECTION 151 / ISOTOPE MASS = 39. L = 1 / AT RESONANCE
ENERGY 1.46468E+05 EV. THE GAMMA WIDTH 5.30790E-02 DEVIATES TOO
MUCH FROM THE AVERAGE 1.08495E+00 (0): Gamma width*

```
    FILE  2
       SECTION 151
          ISOTOPE MASS =  39. L =  1
                    AT RESONANCE ENERGY  1.46468E+05 EV. THE GAMMA WIDTH  5.30790E-02 DEVIATES TOO MUCH FROM THE AV
```

43. Gamma width not in agreement with PSYCHE's expectations
*FILE 2 / SECTION 151 / ISOTOPE MASS = 39. L = 1 / AT RESONANCE
ENERGY 1.54610E+05 EV. THE GAMMA WIDTH 2.02020E-01 DEVIATES TOO
MUCH FROM THE AVERAGE 1.08495E+00 (0): Gamma width*

```
    FILE  2
       SECTION 151
          ISOTOPE MASS =  39. L =  1
                    AT RESONANCE ENERGY  1.54610E+05 EV. THE GAMMA WIDTH  2.02020E-01 DEVIATES TOO MUCH FROM THE AV
```

44. Gamma width not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ISOTOPE MASS = 39. L = 1 / AT RESONANCE

16

ENERGY 1.63304E+05 EV. THE GAMMA WIDTH 4.17940E+00 DEVIATES TOO
MUCH FROM THE AVERAGE 1.08495E+00 (0): Gamma width

```
FILE  2
   SECTION 151
      ISOTOPE MASS =  39. L =  1
                  AT RESONANCE ENERGY  1.63304E+05 EV. THE GAMMA WIDTH  4.17940E+00 DEVIATES TOO MUCH FROM THE AV
```

45. Gamma width not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ISOTOPE MASS = 39. L = 1 / AT RESONANCE
ENERGY 2.00061E+05 EV. THE GAMMA WIDTH 2.65900E-01 DEVIATES TOO
MUCH FROM THE AVERAGE 1.08495E+00 (0): Gamma width

```
FILE  2
   SECTION 151
      ISOTOPE MASS =  39. L =  1
                  AT RESONANCE ENERGY  2.00061E+05 EV. THE GAMMA WIDTH  2.65900E-01 DEVIATES TOO MUCH FROM THE AV
```

46. Gamma width not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ISOTOPE MASS = 39. L = 1 / AT RESONANCE
ENERGY 2.00880E+05 EV. THE GAMMA WIDTH 3.25790E+00 DEVIATES TOO
MUCH FROM THE AVERAGE 1.08495E+00 (0): Gamma width

```
FILE  2
   SECTION 151
      ISOTOPE MASS =  39. L =  1
                  AT RESONANCE ENERGY  2.00880E+05 EV. THE GAMMA WIDTH  3.25790E+00 DEVIATES TOO MUCH FROM THE AV
```

47. Gamma width not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ISOTOPE MASS = 39. L = 1 / AT RESONANCE
ENERGY 2.20250E+05 EV. THE GAMMA WIDTH 2.43990E-01 DEVIATES TOO
MUCH FROM THE AVERAGE 1.08495E+00 (0): Gamma width

```
FILE  2
   SECTION 151
      ISOTOPE MASS =  39. L =  1
                  AT RESONANCE ENERGY  2.20250E+05 EV. THE GAMMA WIDTH  2.43990E-01 DEVIATES TOO MUCH FROM THE AV
```

48. Gamma width not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ISOTOPE MASS = 39. L = 1 / AT RESONANCE
ENERGY 2.24860E+05 EV. THE GAMMA WIDTH 3.44760E-01 DEVIATES TOO
MUCH FROM THE AVERAGE 1.08495E+00 (0): Gamma width

```
FILE  2
   SECTION 151
      ISOTOPE MASS =  39. L =  1
                  AT RESONANCE ENERGY  2.24860E+05 EV. THE GAMMA WIDTH  3.44760E-01 DEVIATES TOO MUCH FROM THE AV
```

49. Gamma width not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ISOTOPE MASS = 39. L = 1 / AT RESONANCE
ENERGY 2.28970E+05 EV. THE GAMMA WIDTH 8.49190E-02 DEVIATES TOO
MUCH FROM THE AVERAGE 1.08495E+00 (0): Gamma width

```
FILE  2
   SECTION 151
      ISOTOPE MASS =  39. L =  1
                  AT RESONANCE ENERGY  2.28970E+05 EV. THE GAMMA WIDTH  8.49190E-02 DEVIATES TOO MUCH FROM THE AV
```

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50. Gamma width not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ISOTOPE MASS = 39. L = 1 / AT RESONANCE ENERGY 2.47708E+05 EV. THE GAMMA WIDTH 1.07060E-01 DEVIATES TOO MUCH FROM THE AVERAGE 1.08495E+00 (0): Gamma width

```
FILE  2
   SECTION 151
      ISOTOPE MASS =  39. L =  1
                 AT RESONANCE ENERGY  2.47708E+05 EV. THE GAMMA WIDTH  1.07060E-01 DEVIATES TOO MUCH FROM THE AV
```

51. Gamma width not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ISOTOPE MASS = 39. L = 1 / AT RESONANCE ENERGY 2.48535E+05 EV. THE GAMMA WIDTH 1.08900E-01 DEVIATES TOO MUCH FROM THE AVERAGE 1.08495E+00 (0): Gamma width

```
FILE  2
   SECTION 151
      ISOTOPE MASS =  39. L =  1
                 AT RESONANCE ENERGY  2.48535E+05 EV. THE GAMMA WIDTH  1.08900E-01 DEVIATES TOO MUCH FROM THE AV
```

52. Gamma width not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ISOTOPE MASS = 39. L = 1 / AT RESONANCE ENERGY 2.49497E+05 EV. THE GAMMA WIDTH 9.06670E-02 DEVIATES TOO MUCH FROM THE AVERAGE 1.08495E+00 (0): Gamma width

```
FILE  2
   SECTION 151
      ISOTOPE MASS =  39. L =  1
                 AT RESONANCE ENERGY  2.49497E+05 EV. THE GAMMA WIDTH  9.06670E-02 DEVIATES TOO MUCH FROM THE AV
```

53. Gamma width not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ISOTOPE MASS = 39. L = 1 / AT RESONANCE ENERGY 2.85081E+05 EV. THE GAMMA WIDTH 8.40180E+00 DEVIATES TOO MUCH FROM THE AVERAGE 1.08495E+00 (0): Gamma width

```
FILE  2
   SECTION 151
      ISOTOPE MASS =  39. L =  1
                 AT RESONANCE ENERGY  2.85081E+05 EV. THE GAMMA WIDTH  8.40180E+00 DEVIATES TOO MUCH FROM THE AV
```

54. Gamma width not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ISOTOPE MASS = 39. L = 1 / AT RESONANCE ENERGY 3.33861E+05 EV. THE GAMMA WIDTH 2.43230E-01 DEVIATES TOO MUCH FROM THE AVERAGE 1.08495E+00 (0): Gamma width

```
FILE  2
   SECTION 151
      ISOTOPE MASS =  39. L =  1
                 AT RESONANCE ENERGY  3.33861E+05 EV. THE GAMMA WIDTH  2.43230E-01 DEVIATES TOO MUCH FROM THE AV
```

55. Gamma width not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ISOTOPE MASS = 39. L = 1 / AT RESONANCE ENERGY 3.44928E+05 EV. THE GAMMA WIDTH 4.94570E+00 DEVIATES TOO MUCH FROM THE AVERAGE 1.08495E+00 (0): Gamma width

```
FILE  2
   SECTION 151
      ISOTOPE MASS =  39. L =  1
                 AT RESONANCE ENERGY  3.44928E+05 EV. THE GAMMA WIDTH  4.94570E+00 DEVIATES TOO MUCH FROM THE AV
```

56. Gamma width not in agreement with PSYCHE's expectations
*FILE 2 / SECTION 151 / ISOTOPE MASS = 39. L = 1 / AT RESONANCE
ENERGY 3.59549E+05 EV. THE GAMMA WIDTH 5.76100E+00 DEVIATES TOO
MUCH FROM THE AVERAGE 1.08495E+00 (0): Gamma width*

```
FILE  2
   SECTION 151
      ISOTOPE MASS =  39. L =  1
                 AT RESONANCE ENERGY  3.59549E+05 EV. THE GAMMA WIDTH  5.76100E+00 DEVIATES TOO MUCH FROM THE AV
```

57. Gamma width not in agreement with PSYCHE's expectations
*FILE 2 / SECTION 151 / ISOTOPE MASS = 39. L = 1 / AT RESONANCE
ENERGY 3.65844E+05 EV. THE GAMMA WIDTH 2.42130E-01 DEVIATES TOO
MUCH FROM THE AVERAGE 1.08495E+00 (0): Gamma width*

```
FILE  2
   SECTION 151
      ISOTOPE MASS =  39. L =  1
                 AT RESONANCE ENERGY  3.65844E+05 EV. THE GAMMA WIDTH  2.42130E-01 DEVIATES TOO MUCH FROM THE AV
```

58. Gamma width not in agreement with PSYCHE's expectations
*FILE 2 / SECTION 151 / ISOTOPE MASS = 39. L = 1 / AT RESONANCE
ENERGY 3.66353E+05 EV. THE GAMMA WIDTH 2.32550E-01 DEVIATES TOO
MUCH FROM THE AVERAGE 1.08495E+00 (0): Gamma width*

```
FILE  2
   SECTION 151
      ISOTOPE MASS =  39. L =  1
                 AT RESONANCE ENERGY  3.66353E+05 EV. THE GAMMA WIDTH  2.32550E-01 DEVIATES TOO MUCH FROM THE AV
```

59. Gamma width not in agreement with PSYCHE's expectations
*FILE 2 / SECTION 151 / ISOTOPE MASS = 39. L = 1 / AT RESONANCE
ENERGY 3.67106E+05 EV. THE GAMMA WIDTH 3.13150E-01 DEVIATES TOO
MUCH FROM THE AVERAGE 1.08495E+00 (0): Gamma width*

```
FILE  2
   SECTION 151
      ISOTOPE MASS =  39. L =  1
                 AT RESONANCE ENERGY  3.67106E+05 EV. THE GAMMA WIDTH  3.13150E-01 DEVIATES TOO MUCH FROM THE AV
```

60. Gamma width not in agreement with PSYCHE's expectations
*FILE 2 / SECTION 151 / ISOTOPE MASS = 39. L = 1 / AT RESONANCE
ENERGY 3.88724E+05 EV. THE GAMMA WIDTH 3.52840E-01 DEVIATES TOO
MUCH FROM THE AVERAGE 1.08495E+00 (0): Gamma width*

```
FILE  2
   SECTION 151
      ISOTOPE MASS =  39. L =  1
                 AT RESONANCE ENERGY  3.88724E+05 EV. THE GAMMA WIDTH  3.52840E-01 DEVIATES TOO MUCH FROM THE AV
```

61. Gamma width not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ISOTOPE MASS = 39. L = 1 / AT RESONANCE

ENERGY 4.05679E+05 EV. THE GAMMA WIDTH 2.88770E-01 DEVIATES TOO MUCH FROM THE AVERAGE 1.08495E+00 (0): Gamma width

```
FILE  2
   SECTION 151
      ISOTOPE MASS =  39. L =  1
              AT RESONANCE ENERGY  4.05679E+05 EV. THE GAMMA WIDTH  2.88770E-01 DEVIATES TOO MUCH FROM THE AV
```

62. Gamma width not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ISOTOPE MASS = 39. L = 1 / AT RESONANCE ENERGY 4.09252E+05 EV. THE GAMMA WIDTH 3.66840E+00 DEVIATES TOO MUCH FROM THE AVERAGE 1.08495E+00 (0): Gamma width

```
FILE  2
   SECTION 151
      ISOTOPE MASS =  39. L =  1
              AT RESONANCE ENERGY  4.09252E+05 EV. THE GAMMA WIDTH  3.66840E+00 DEVIATES TOO MUCH FROM THE AV
```

63. Gamma width not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ISOTOPE MASS = 39. L = 1 / AT RESONANCE ENERGY 4.57384E+05 EV. THE GAMMA WIDTH 3.19390E-01 DEVIATES TOO MUCH FROM THE AVERAGE 1.08495E+00 (0): Gamma width

```
FILE  2
   SECTION 151
      ISOTOPE MASS =  39. L =  1
              AT RESONANCE ENERGY  4.57384E+05 EV. THE GAMMA WIDTH  3.19390E-01 DEVIATES TOO MUCH FROM THE AV
```

64. Non-threshold reaction with Q value differing from PSYCHE's expectations
FILE 3 / SECTION 103 / THE CALCULATED Q 3.85860E+05 DISSAGREES WITH THE GIVEN Q 2.17170E+05 (0): Iffy Q

```
FILE  3
   SECTION 103
           THE CALCULATED Q  3.85860E+05 DISSAGREES WITH THE GIVEN Q  2.17170E+05
```

65. Non-threshold reaction with Q value differing from PSYCHE's expectations
FILE 3 / SECTION 107 / THE CALCULATED Q 1.47963E+06 DISSAGREES WITH THE GIVEN Q 1.36325E+06 (0): Iffy Q

```
FILE  3
   SECTION 107
           THE CALCULATED Q  1.47963E+06 DISSAGREES WITH THE GIVEN Q  1.36325E+06
```

- `recent` Warnings:

  1. Fission widths given for non-fissile nucleus, but are zero
  0: Fission?

  ```
  Calculate Cross Sections from Resonance Parameters (RECENT 2015-1)
  =============================================================================
  Retrieval Criteria-----------        MAT
  File 2 Mimimum Cross Section- 1.0000E-10 (Standard Option)
  Reactions with No Background-    Output (Resonance Contribution)
  ... [504 more lines]
  ```

- `fudge-4.0` Warnings:

  1. Cross section does not match sum of linked reaction cross sections
     crossSectionSum label 0: total (Error # 0): CS Sum.

     ```
     WARNING: Cross section does not match sum of linked reaction cross sections! Max diff: 0.40%
     ```

  2. Cross section does not match sum of linked reaction cross sections
     crossSectionSum label 1: (z,n) (Error # 0): CS Sum.

     ```
     WARNING: Cross section does not match sum of linked reaction cross sections! Max diff: 0.12%
     ```

- `fudge-4.0` Errors:

  1. Energy range of data set does not match cross section range
     reaction label 5: n + (K39_c ->K39 + gamma) / Product: K39_c / Decay product: gamma / Multiplicity: (Error # 0): Domain mismatch (a)

     ```
     WARNING: Domain doesn't match the cross section domain: (3898360.0 -> 20000000.0) vs (3898370.0 -> 20000000.0)
     ```

  2. Energy range of data set does not match cross section range
     reaction label 5: n + (K39_c ->K39 + gamma) / Product: K39_c / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)

     ```
     WARNING: Domain doesn't match the cross section domain: (3898360.0 -> 20000000.0) vs (3898370.0 -> 20000000.0)
     ```

  3. Energy range of data set does not match cross section range
     reaction label 5: n + (K39_c ->K39 + gamma) / Product: K39_c / uncorrelated - energy - XYs2d: (Error # 0): Domain mismatch (a)

     ```
     WARNING: Domain doesn't match the cross section domain: (3898360.0 -> 20000000.0) vs (3898370.0 -> 20000000.0)
     ```

  4. Calculated and tabulated Q values disagree.
     reaction label 6: n[multiplicity:'2'] + K38 + gamma (Error # 0): Q mismatch

     ```
     WARNING: Calculated and tabulated Q-values disagree: -12786125.22605896 eV vs -1.3085e7 eV!
     ```

  5. Calculated and tabulated Q values disagree.
     reaction label 7: n + H1 + Ar38 + gamma (Error # 0): Q mismatch

     ```
     WARNING: Calculated and tabulated Q-values disagree: -6089918.496711731 eV vs -6380110. eV!
     ```

  6. Calculated and tabulated Q values disagree.
     reaction label 8: K40 + gamma (Error # 0): Q mismatch

     ```
     WARNING: Calculated and tabulated Q-values disagree: 8091022.808937073 eV vs 7800990. eV!
     ```

  7. Calculated and tabulated Q values disagree.
     reaction label 9: n + He4 + Cl35 + gamma (Error # 0): Q mismatch

     ```
     WARNING: Calculated and tabulated Q-values disagree: -6926875.287387848 eV vs -7217230. eV!
     ```

  8. Calculated and tabulated Q values disagree.
     reaction label 10: H1 + (Ar39_s ->Ar39 + gamma) (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: 508858.677986145 eV vs 217170. eV!
```

9. Calculated and tabulated Q values disagree.
   reaction label 11: He4 + (Cl36_s ->Cl36 + gamma) (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: 1652759.375007629 eV vs 1363250. eV!
```

- njoy2012 Warnings:

  1. Message comes from several resonance types that do not support the calculation of angular distributions. Some of them can be used if `Want_SAMRL_RM` or `Want_SAMRML_BW` are true.
     reconr...reconstruct pointwise cross sections in pendf format (0): RECONR/calculation of angular distribution not installed (0)

     ```
       ---message from rdf2bw---calculation of angular distribution not installed.
         samm max legendre order:  0
     ```

  2. Evaluation has no unresolved resonance parameters given
     unresr...calculation of unresolved resonance cross sections (0): No URR

     ```
       ---message from unresr---mat 1925 has no unresolved parameters
                         copy as is to nout
     ```

  3. Evaluation has no unresolved resonance parameters given
     purr...probabalistic unresolved calculation (0): No URR

     ```
       ---message from purr---mat 1925 has no unresolved parameters
                       copy as is to nout
     ```

  4. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!
     groupr...compute self-shielded group-averaged cross-sections (0): GROUPR/conver (0)

     ```
       ---message from conver---cannot do complete particle production for mt= 16
                         only mf4/mf5 provided
     ```

  5. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!
     groupr...compute self-shielded group-averaged cross-sections (1): GROUPR/conver (0)

     ```
       ---message from conver---cannot do complete particle production for mt= 22
                         only mf4/mf5 provided
     ```

  6. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!
     groupr...compute self-shielded group-averaged cross-sections (2): GROUPR/conver (0)

22

```
       ---message from conver---cannot do complete particle production for mt= 28
                              only mf4/mf5 provided
```

7. With the advent of the ENDF-6 format, it is possible to make evaluations that
   fully describe all the products of a nuclear reaction. Some carry-over evaluations
   from earlier ENDF/B versions also have this capability, but many do not. This
   message is intended to goad evaluators to improve things!
   groupr...compute self-shielded group-averaged cross-sections (3): GROUPR/conver
   (0)

```
       ---message from conver---cannot do complete particle production for mt= 91
                              only mf4/mf5 provided
```